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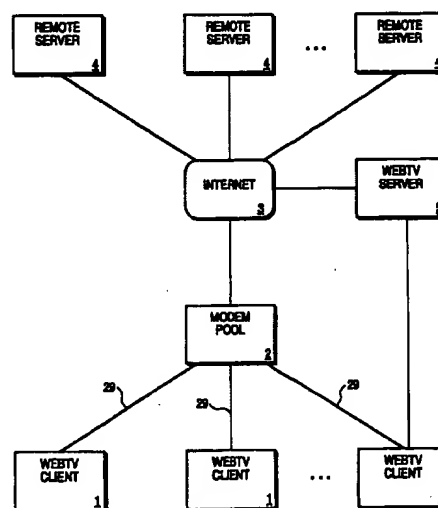
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(54) **Method and apparatus for providing proxying and transcoding of documents in a distributed network**

(57) A method of providing a document to a client coupled to a server is provided. The server provides a number of Internet services to the client, including functioning as a caching proxy on behalf of the client for purposes of accessing the World Wide Web. The proxying server includes a persistent document database, which stores various attributes of all documents previously retrieved in response to a request from a client. When a Web document is retrieved from a remote server in response to a request from the client, the database is consulted and the stored information relating to the requested document is used by the server in transcoding the document. The document is transcoded for various purposes, including to circumvent bugs or quirks found in the document, to size the document for display on a television set, to improve transmission efficiency of the document, and to reduce latency. The transcoder makes use of the document database to perform these functions. The document database is also used for prefetching previously requested documents and images and for reducing latency when downloading images to the client.



**FIG. 1**



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## EUROPEAN SEARCH REPORT

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EP 97 30 2827

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	BROOKS, C., MAZER, M.S., MEEKS, S., MILLER, J.: "Application-specific Proxy Servers as HTTP Stream Transducers" FOURTH INTERNATIONAL WORLD WIDE WEB CONFERENCE, BOSTON, December 1995, pages 1-9, XP002081461 <a href="http://www.w3.org/Conferences/WWW4/Papers/56/">http://www.w3.org/Conferences/WWW4/Papers/56/</a> * the whole document *	1,2,5,6, 8-12,15, 17,23,24	G06F17/30
A	---	3,13	
X	FOX A ET AL: "Reducing WWW latency and bandwidth requirements by real-time distillation" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 28, no. 11, May 1996, page 1445-1456 XP004018241 * the whole document *	1,4-7, 10-12, 19,23,24	
X	EP 0 573 248 A (HUGHES AIRCRAFT CO) 8 December 1993 * abstract * * claims *	20-22	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G06F
A	LUOTONEN A ET AL: "World-Wide Web proxies" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 27, no. 2, November 1994, page 147-154 XP004037985 * the whole document *	1-24	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 November 1998	Examiner Abbing, R
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			

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Application Number  
EP 97 30 2827

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IntCl.6)
A	<p>SCHULZRINNE H: "WORLD WIDE WEB: WHENCE, WHITHER, WHAT NEXT?"</p> <p>IEEE NETWORK: THE MAGAZINE OF COMPUTER COMMUNICATIONS,</p> <p>vol. 10, no. 2, 1 March 1996, pages 10-17, XP000570608</p> <p>* page 16, column 2, line 37 - page 16, column 2, line 50 *</p> <p>-----</p>	1,4	
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The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	11 November 1998	Abbing, R	
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p> <p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			

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